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Navy Reports a 'Breakthrough' for Its Superlaser

By [Spencer Ackerman](#) [Email](#) [Author](#)

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One day, the Navy swears, it'll have a massive laser aboard its ships to fry missiles out of the sky. That day is still years off. But a very excited Office of Naval Research reports that it's nine months ahead of schedule, thanks to what it calls a "remarkable breakthrough."

The Navy's Free Electron Laser program uses massively charged electron streams generated by an injector to focus light across multiple wavelengths, making it more powerful than most lasers. Turning it into a death ray requires at least 100 kilowatts worth of power. So far, the prototype Free Electron Laser that the Navy has can only generate 14.

But now the Navy thinks it's broken a power threshold. Tests in December of a new injector yielded the electrons necessary to get the Free Electron Laser up to "megawatt class" beams, the Office of Naval Research said in a statement issued today, nine months ahead of schedule. One of the project's lead researchers, Dinh Nguyen, said in the statement that he hoped to "set a world record for the average current of electrons."

Getting it on board a ship is still a long ways away. Boeing has a contract to get the Navy a new prototype laser by early 2012. Even with the new injector showing promise, researchers don't anticipate a shipboard test until 2018.

But the arrival of a superlaser for maritime defense is a potential gamechanger. It would represent a speed-of-light weapon that never has to be reloaded, feeding on a ship's generator, to burn through incoming missiles or aircraft. And that's not all: program manager Quentin Saulter told Danger Room in November that the Free Electron Laser can be used as a sensor, a tracker or a guidance system for a ship's conventional weapons.

The Navy isn't just looking at lasers for its future shipboard defense. Last month, it set a world record for [sending 33 megajoules of energy through a railgun](#), propelling a bullet out from its barrel at mach-8 speeds. Between the rail gun and the Free Electron Laser, the Navy's looking both to neutralize a new generation of anti-ship missiles — hint hint: China — and increase the firing range of its ships in case they have to operate against an enemy further out to sea.

The injector will undergo a design review scheduled to wrap up tomorrow. Expect much high-fiving amongst the research team. And as the laser gets its upgrades, maybe it'll put humanity a step closer to [discovering and harnessing cosmic energy](#).

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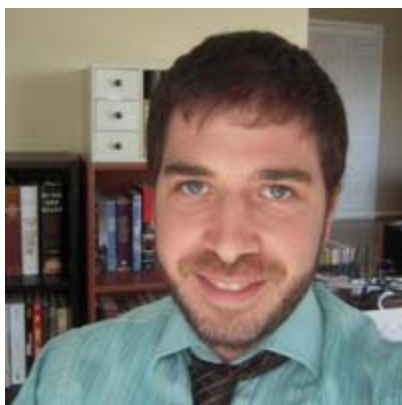
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Danger Room senior reporter Spencer Ackerman recently won the [2012 National Magazine Award for Reporting in Digital Media](#).

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jaymoney

Im surprised that bumbling fool gates didnt cut this thing... after all, what use do things like Lasers and F22's have to do with fighting terrorists in caves? I wonder if gates is rethinking his cuts now that China is becoming more of an aggressor.

1 year ago 3 Likes

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Dust

Technology is and always has been the key to winning. It costs and wins. I enjoy the military channel series on tech advances.

1 year ago 2 Likes

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hibeam

Why can't we get a reasonably powerful laser on a drone to harrass the Taliban? Even if it only set beards on fire it would ruin their day and make them think about other lines of work.

1 year ago 1 Like

Like



jkelsey1

When the US is pursuing technological military advances like this why are people surprised when the China is doing the same? @alexisftg: I agree with you.

@ The web site manager, are comments being removed when posted? I'm unsubscribing from this site if it happens again. This is like the second time it has happened.

1 year ago 1 Like

Like



dg32

Yes, but can it cook a whole house full of popcorn?

1 year ago 1 Like

Like



stonemason89

It'll probably cook the house too, not just the popcorn.

1 year ago in reply to dg32

Like



esande

@ImmortalSoFar - all China has to do to sink itself is call in the US debt. If we are bankrupted who will buy all the crap that China makes...? Certainly not their meager domestic demand...

1 year ago

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memos87



Actually the US is going to screw China with hyperinflation. When they ask for the money, the US is going to print the money off and then be like "here is the worthless we owe you", which sucks for people who have saved money, but is great for metals and the Euro

1 year ago

Like



James_Lee

@ImmortalSoFar We have a defense against China calling in our debt. It's called out Defense Department. US economic interests are backed by our military might. China calls in our debt? We bomb the place until they stop asking, and then get them to sign a piece of paper saying that we're all paid up. Foreign diplomacy is fun!

1 year ago

Like



Jackov

Lasers are useless in rain, snow, or mist.
Torpedoes & mines can still sink surface ships.

1 year ago

Like



ImmortalSoFar

All China has to do to sink the US navy is to call in the debt. Maybe we should come up with a defense against that!

1 year ago

Like



ripvanwinkle

@alexisftg: it's a short brief article about a breakthrough. I find it very interesting. Who gives a crap about your journalistic requirements or opinions? Oh, no one.

@jaymoney: What do lasers and F22's have to do with terrorist in caves? Probably nothing. But it has a lot to do with shooting down missiles and aircraft. Next time you decide to comment on an article, please read it first.

1 year ago

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alexisgtg

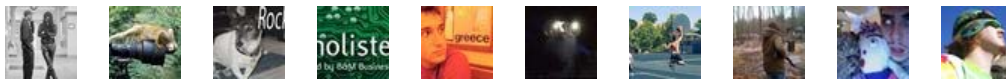
"But a very excited Office of Naval Research excitedly ..." I suppose that Wired writers could not find a synonym for excited/excitedly. I am just energized, thrilled and...what's the use. Terrible writing, as well as coverage, for an item that Danger Room has been following for over five years.

1 year ago

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